PIONEER®
The Art of Entertainment

Service Manual

ORDER NO.
ARP2679

STEREO DOUBLE CASSETTE DECK

CT-W402R
CT-W420R

- **Refer to the service manual ARP2696, CT–W502R/KUXJ.**

CT-W402R AND CT-W420R HAVE THE FOLLOWING:

Type	Model		Power Requirement	Remarks
	CT-W402R	CT-W420R		
KUXJ	○	–	AC120V only	
HEM	–	○	AC220 – 230V, 230 – 240V (Switchable) *	
HB	–	○	AC220 – 230V, 230 – 240V (Switchable) *	
HBXJ	–	○	AC220 – 230V, 230 – 240V (Switchable) *	
HEMXJ	–	○	AC220 – 230V, 230 – 240V (Switchable) *	

* Change the connection of the power transformer's primary wiring.

- **This manual is applicable to the following: CT-W402R/KUXJ ;CT-W420R/HEM,HB, HBXJ and HEMXJ.**

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1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 × 10^1 → 561 ····· RD1/8PM 5 6 1 J
47k Ω → 47 × 10^3 → 473 ····· RD1/4PS 4 7 3 J
0.5 Ω → 0R5 ····· RN2H 0 R 5 K
1 Ω → 010 ····· RS1P 0 1 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10^1 → 5621 ····· RN1/4PC 5 6 2 1 F

1.1 CONTRAST OF MISCELLANEOUS PARTS

CT-W402R/KUXJ, CT-W420R/HEM, HB, HBXJ, HEMXJ and CT-W502R/KUXJ have the same construction except for the following:

Mark	Symbol & Description	Part No.						Remarks
		CT-W502R/ KUXJ	CT-W402R/ KUXJ	CT-W420R/ HEM	CT-W420R/ HB	CT-W420R/ HBXJ	CT-W420R/ HEMXJ	
NSP	Mother unit	RWM1581	RWM1597	RWM1598	RWM1598	RWM1598	RWM1598	
	Main unit	RWZ2823	RWZ2843	RWZ2846	RWZ2846	RWZ2846	RWZ2846	
	Display unit	RWZ2825	RWZ2844	RWZ2847	RWZ2847	RWZ2847	RWZ2847	
NSP	Transformer 1 unit	RWZ2941	RWZ2941	RWZ2930	RWZ2930	RWZ2930	RWZ2930	
NSP	Transformer 2 unit	RWZ2827	RWZ2845	RWZ2848	RWZ2848	RWZ2848	RWZ2848	
NSP	LED unit	·····	·····	RWZ2932	RWZ2932	RWZ2932	RWZ2932	
⚠	Strain relief	CM – 22C	CM – 22C	CM – 22B	CM – 22B	CM – 22B	CM – 22B	
⚠	AC power cord	PDG1015	PDG1015	PDG1003	VDG1051	VDG1051	PDG1003	
⚠	Power transformer (AC120V)	RTT1223	RTT1223	·····	·····	·····	·····	
⚠	Power transformer (AC220 – 230/230 – 240V)	·····	·····	RTT1224	RTT1224	RTT1224	RTT1224	
	BS pin cap	·····	·····	·····	VEC1616	VEC1616	·····	for AC power cord
⚠	FU1, FU2 Fuse (UL1.5A)	DEK1014	DEK1014	·····	·····	·····	·····	
⚠	FU1, FU2 Fuse (T1.6A)	·····	·····	REK1024	REK1024	REK1024	REK1024	
⊙	Mechanism unit (DECK I)	RYM1198	RYM1202	RYM1198	RYM1198	RYM1198	RYM1198	
	Knob	RAC1783	RAC1790	RAC1784	RAC1784	RAC1784	RAC1784	
	FL lens	RAH2179	RAH2215	RAH2216	RAH2216	RAH2216	RAH2216	
	Front panel	RAH1281	RAH2204	RAH2182	RAH2182	RAH2182	RAH2182	
	Door pocket L	RAH2183	RAH2212	RAH2183	RAH2183	RAH2183	RAH2183	
	Door pocket R	RAH2184	RAH2184	RAH2185	RAH2185	RAH2185	RAH2185	
	Foot assembly	PXA1201	PXA1201	·····	·····	·····	·····	
	Insulator	·····	·····	PNW1912	PNW1912	PNW1912	PNW1912	for foot
	Rubber sheet	AEB1111	AEB1111	·····	·····	·····	·····	
	LED lens	·····	·····	PNW2019	PNW2019	PNW2019	PNW2019	
NSP	Rear panel	RNA1702	RNA1704	RNA1665	RNA1666	RNA1672	RNA1671	
NSP	Mechanism shield plate	RNE1519	·····	RNE1519	RNE1519	RNE1519	RNE1519	
NSP	Main chassis	RNB1091	RNB1091	RNB1089	RNB1089	RNB1091	RNB1091	
	Sheet	Z23 – 007	Z23 – 007	RHX – 034	RHX – 034	Z23 – 007	Z23 – 007	
	Packing case	RHG1480	RHG1482	RHG1435	RHG1436	RHG1443	RHG1442	
	Spacer A	·····	·····	·····	RHC1032	RHC1032	·····	for packing
	Spacer B	·····	·····	·····	RHC1033	RHC1033	·····	for packing
	Operating instructions (English)	RRB1127	RRB1127	·····	RRB1130	RRB1127	·····	
	Operating instructions (English/French/German/Italian/Dutch/ Swedish/Spanish/Portuguese)	·····	·····	RRE1075	·····	·····	RRE1072	

DISPLAY UNIT

RWZ2844, RWZ2847 and RWZ2825 have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		RWZ2825	RWZ2844	RWZ2847	
	S1518	RSG1034	.....	.....	

TRANSFORMER 1 UNIT

Although RWZ2930 and RWZ2941 are different in part number, they consist of the same components.

TRANSFORMER 2 UNIT

Although RWZ2845, RWZ2848 and RWZ2827 are different in part number, they consist of the same components.

● PCB PARTS LIST

Mark	No.	Description	Part No.
		MAIN UNIT (FOR CT-W402R/KUXJ TYPE)	
		SEMICONDUCTORS	
	IC701, IC902		BA15218
	IC301		BA15218N
	IC101		CXA1115BP
	IC251		CXA1330S
	IC1003, IC1004		NJM7812FA
	IC1002		NJM78M05FA
	IC501		PD4442A
	IC1701		TC4050BP
	IC651		UPC1297CA
	IC903		XRA10393N
	Q802, Q808, Q809, Q852, Q858, Q1005, Q1010		2SA1309A
	Q1001		2SB1041
	Q460, Q804, Q854		2SB1238X
	Q456-Q458		2SC1815
	Q163, Q164, Q459, Q1006, Q1007		2SC3311A
	Q807, Q857		2SD1858X
	Q309-Q312, Q701, Q702		2SD2144S
	Q161, Q162		2SK373
	Q165, Q652		DTA114ES
	Q508, Q751		DTA114TS
	Q108, Q454, Q455, Q904		DTC114TS
	Q101-Q106, Q109, Q167, Q256, Q301-Q308, Q313, Q503-Q507, Q511, Q512, Q653, Q803, Q805, Q853, Q855, Q903		DTC124ES
⚠	D1001		1SR35-100A
⚠	D1006		1SR35-100AVL
	D452, D801, D812		1SS252
	D161-D166, D251, D454, D455, D503-D506, D508, D510, D514, D515, D517, D518, D520, D521, D752, D802, D805-D811, D813-D818, D901-D903, D1009-D1011, D1300-D1305, D1701-D1705		1SS254
	D1002		MTZJ22A
	D1004		MTZJ3.3B
	D753		MTZJ3.9B
	D1003		MTZJ5.1B
	D501		MTZJ9.1A
	D1012		S2VB20
	SWITCHES		
	S1201		RSA1002
	COILS AND FILTERS		
	L451		LFA121K
	L651, L652 (L=4.6MHz, Q=25, F=105KHz)		RTD1046
	L452 (F=105K)		RTD1062
	L101, L102 (L=562J)		RTF1099
	L301, L302 (L=103J)		RTF1102
	L303, L304 (L=123J)		RTF1124
	F251, F252		RTF1208
	CAPACITORS		
	C659, C660		CCCSL101K500
	C161, C162		CCPUSL100J50
	C107-C110		CEANL100M16
	C111, C112		CEANL101M10
	C251-C254, C322, C325, C326, C703, C704		CEAS010M50
	C209, C210, C269, C281-C284, C317, C318, C667, C707, C708, C1016		CEAS100M50
	C291		CEAS101M16
	C1010		CEAS102M10
	C1018		CEAS220M50
	C1001		CEAS221M50
	C285, C286, C451, C458		CEAS330M16
	C914, C1004		CEAS330M35
	C1013, C1015		CEAS331M16
	C913		CEAS331M6R3
	C915, C916		CEAS3R3M50

Mark	No.	Description	Part No.
	C141, C142, C321, C323, C459, C513, C705, C713, C1024		CEAS470M16
	C1007		CEAS472M16
	C1011		CEAS472M25
	C117, C118, C313, C314		CEAS4R7M50
	C664		CEASR10M50
	C265, C266, C275, C315, C316, C917, C918		CEASR22M50
	C267, C268, C273, C274		CEASR33M50
	C293, C294		CFTXA103J50
	C261-C264		CFTXA222J50
	C191, C192, C454		CFTXA223J50
	C311, C312		CFTXA472J50
	C113, C114		CFTXA822J50
	C515		CGCYF104Z25
	C651, C652		CGCYX103K25
	C305, C306		CGCYX123K25
	C307, C308		CGCYX153K25
	C655, C656		CGCYX223K25
	C309, C310		CGCYX272K25
	C319, C320, C455-C457		CGCYX332K25
	C657, C658		CGCYX473K25
	C303, C304		CGCYX562K25
	C509, C510, C514, C1300, C1302		CKCYF103Z50
	C126, C139, C706, C709, C756, C911, C921, C1008, C1020-C1022, C1030, C1201-C1204, C1301, C1701		CKCYF473Z50
	C135-C138, C663, C701, C702, C711, C712, C723, C724		CKPUYB101K50
	C105, C106		CKPUYB102K50
	C301, C302		CKPUYB221K50
	C103, C104, C217, C218		CKPUYB271K50
	C123, C124		CKPUYB391K50
	C121, C122		CKPUYB471K50
	C101, C102, C133, C134, C801, C851		CKPUYB681K50
	C653, C654, C923, C924		CKPUYB821K50
	C453		CQPA752J100
	C661, C662(C=430P, V(DC)=500)		RCG1005
RESISTORAS			
	R518(68K)		RA11T683J
	R1701(22K)		RA5T223J
	R512(68K)		RA6T683J
	R341, R342(560Ω)		RCN1024
	R1702(11K/22K)		RCX1020
	R510(22K)		RCX1041
	R501(47K)		RCX1045
	R528(10K)		RCX1049
	R451		RD1/2LF010J
	R468		RD1/2LF100J
	R1001		RD1/2PMF152J
	R461		RD1/2LF680J
	R1020(47Ω)		RFA1/4L470J
	R1002(470Ω)		RS2LMF471J
	VR851(10K)		RCP1045
	VR101-VR104, VR301, VR302, VR651, VR652(22K)		RCP1046
	VR802, VR852(15K)		RCP1090
	VR2002(5K)		RCV1089
	OTHER RESISTORS		RD1/6PM□□□J
OTHERS			
	CN1503 CONNECTOR(35P)		52045-3545
	CN801 CONNECTOR(12P)		KPE12
	CN851 CONNECTOR(14P)		KPE14
	JA1300 MINI JACK		PKN1005
	JA701 PIN JACK(4P)		RKB-020
	JA1301, JA1302 REMOTE CONTROL JACK		RKN1004
	X501 CERAMIC RESONATOR(4.19MHz)		VSS1014
	CN101, CN102		B3B-EH
	CN451		B2B-EH

MAIN UNIT (FOR CT-W420R/HEM, HB, HEMXJ AND HBXJ TYPES)

Mark	No.	Description	Part No.
SEMICONDUCTORS			
		IC701, IC902	BA15218
		IC301, IC1601	BA15218N
		IC101	CXA1115BP
		IC251	CXA1330S
⚠		IC1003, IC1004	NJM7812FA
⚠		IC1002	NJM78M05FA
		IC501	PD4442A
		IC1701	TC4050BP
		IC903	XRA10393N
⚠		Q1001	2SA1286
		Q513, Q802, Q808, Q809, Q852, Q858, Q1005, Q1010	2SA1309A
		Q460, Q461, Q804, Q854	2SB1238X
		Q456-Q458	2SC1815
		Q163, Q164, Q1006, Q1007	2SC3311A
		Q807, Q857	2SD1858X
		Q309-Q312, Q701, Q702	2SD2144S
		Q161, Q162	2SK373
		Q165	DTA114ES
		Q508, Q751	DTA114TS
		Q108, Q454, Q455, Q904	DTC114TS
		Q101-Q106, Q109, Q167, Q256, Q301-Q308, Q313, Q503-Q507, Q511, Q512, Q514, Q803, Q805, Q853, Q855, Q903	DTC124ES
⚠		D1001	1SR35-100A
⚠		D1006	1SR35-100AVL
		D452, D453, D801, D812	1SS252
		D161-D166, D251, D503-D506, D508, D509, D514-D518, D520, D521, D523-D526, D752, D802, D805-D811, D813-D818, D901-D903,	1SS254
⚠		D1009, D1010, D1011, D1300-D1305, D1701-D1705	
⚠		D1002	MTZJ22A
		D1004	MTZJ3.3B
		D753	MTZJ3.9B
		D1003	MTZJ5.1B
		D501	MTZJ9.1A
⚠		D1012	S2VB20

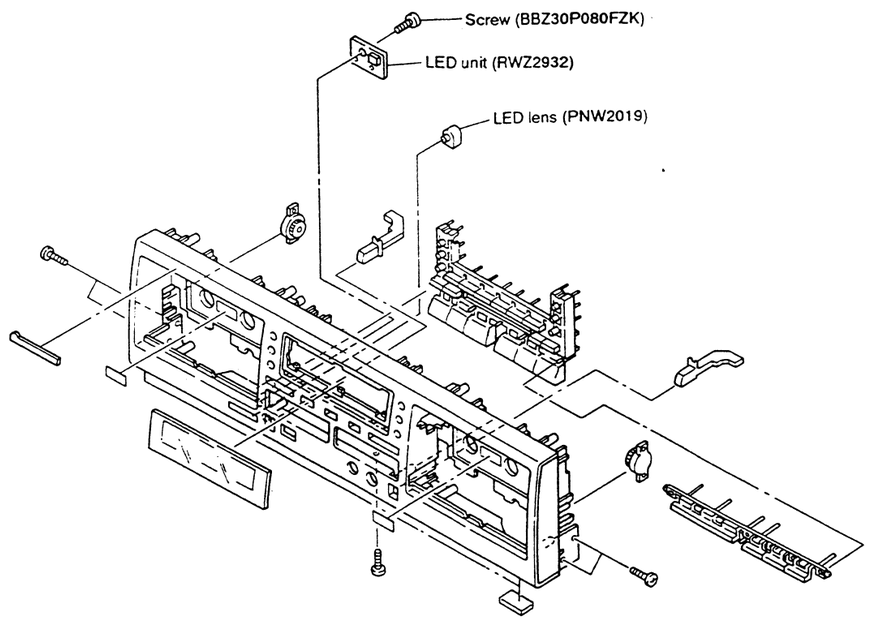
Mark	No.	Description	Part No.
SWITCHES			
⚠	S1201		RSA1002
COILS AND FILTERS			
	L451		LFA121K
	L452	(F=105K)	RTD1068
	L101, L102	(L=562J)	RTF1099
	L301, L302	(L=103J)	RTF1102
	L303, L304	(L=123J)	RTF1124
	F251, F252		RTF1208
CAPACITORS			
	C461, C462		CCCSL101K500
	C161, C162		CCPUSL100J50
	C107-C110		CEANL100M16
	C111, C112		CEANL101M10
	C251-C254, C322, C325, C326, C703, C704		CEAS010M50
	C209, C210, C269, C281-C284, C317, C318, C707, C708, C1016		CEAS100M50
	C291, C1603, C1604		CEAS101M16
	C1010		CEAS102M10
	C1018		CEAS220M50
	C1001		CEAS221M50
	C285, C286, C451, C458		CEAS330M16
	C914, C1004		CEAS330M35
	C1013, C1015, C1605		CEAS331M16
	C913		CEAS331M6R3
	C915, C916		CEAS3R3M50
	C141, C142, C321, C323, C459, C513, C705, C713, C1024		CEAS470M16
	C1007		CEAS472M16
	C117, C118, C313, C314		CEAS4R7M50
	C265, C266, C275, C315, C316, C917, C918, C1601, C1602		CEASR22M50
	C267, C268, C273, C274		CEASR33M50
	C293, C294		CFTXA103J50
	C454		CFTXA183J50
	C261-C264		CFTXA222J50
	C191, C192		CFTXA223J50
	C311, C312		CFTXA472J50
	C113, C114		CFTXA822J50
	C515		CGCYF104Z25
	C305, C306		CGCYX123K25
	C307, C308		CGCYX153K25
	C309, C310		CGCYX272K25
	C319, C320, C456, C457		CGCYX332K25
	C455		CGCYX472K25
	C303, C304		CGCYX562K25
	C509, C510, C514, C1300, C1302		CKCYF103Z50
	C126, C139, C706, C709, C756, C911, C921, C1008, C1020-C1022, C1030, C1201-C1204, C1301, C1701, C2020		CKCYF473Z50
	C135-C138, C701, C702, C711, C712, C723, C724		CKPUYB101K50
	C105, C106		CKPUYB102K50
	C301, C302		CKPUYB221K50
	C103, C104, C217, C218		CKPUYB271K50
	C123, C124		CKPUYB391K50
	C121, C122		CKPUYB471K50
	C101, C102, C133, C134, C801, C851		CKPUYB681K50
	C923, C924		CKPUYB821K50
	C453		CQPA682J100
	C1011	(C=4700, VDC=35V)	RCH1089
RESISTORS			
⚠	R1021	(10Ω)	DCN1002
	R518	(68K)	RA11T683J
	R1701	(22K)	RA5T223J
	R512	(68K),	RA6T683J
	R341, R342	(560Ω)	RCN1024
	R1702	(11K/22K)	RCX1020
	R510	(22K)	RCX1041
	R501	(47K)	RCX1045
	R528	(10K)	RCX1049
	R451, R468		RD1/2LF010J
⚠	R1020		RD1/2LF010J
	R461		RD1/2LF181J
	R470		RD1/2LF201J
	R1001		RD1/2PMF152J
	R1609	(220Ω)	RS2LMF221J
	R1002	(470Ω)	RS2LMF471J
	VR851	(10K)	RCP1045
	VR101-VR104, VR301, VR302	(22K)	RCP1046
	VR451, VR452	(100K)	RCP1048
	VR802, VR852	(15K)	RCP1090
	VR2002	(5K)	RCV1089
	OTHER RESISTORS		RD1/6PM□□□J
OTHERS			
	CN1503	CONNECTOR (35P)	52045-3545
	CN801	CONNECTOR (12P)	KPE12
	CN851	CONNECTOR (14P)	KPE14
	JA1300	MINI JACK	PKN1005
	JA701	PIN JACK (4P)	RKB-020
	JA2003	HEADPHONE JACK	RKN1002
	JA1301, JA1302	REMOTE CONTROL JACK	RKN1004
	X501	CERAMIC RESONATOR (4.19MHz)	VSS1014

LED UNIT (FOR CT-W420R/HEM, HB, HEMXJ AND HBXJ TYPES ONLY)

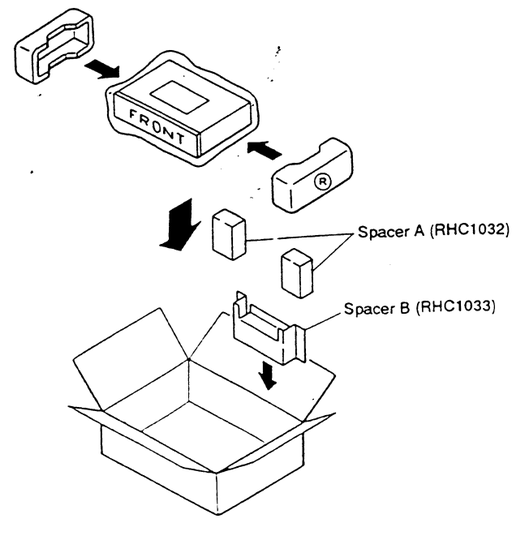
Mark	No.	Description	Part No.
SEMICONDUCTORS			
	D527		SEL6C10R
RESISTORS			
	R521		RD1/6PM330J

1.2 FOR LED UNIT, LED LENS AND SPACERS

- **Exploded view (For CT-W420R/HEM, HB, HEMXJ and HBXJ types)**



- **Packing (CT-W420R/HB and HBXJ types)**



• PCB diagrams

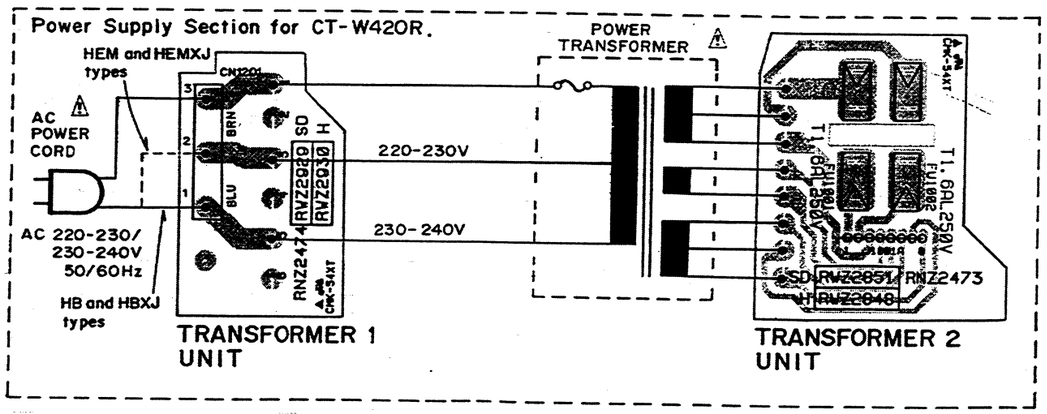
• View from component side

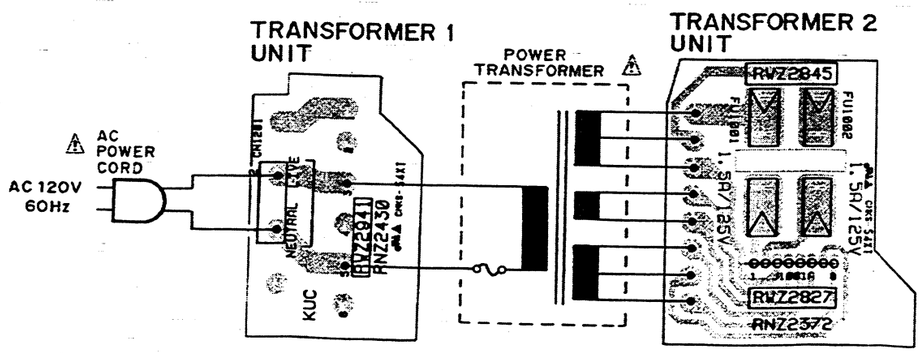
Line Voltage Selection

Line voltage can be changed with the following steps.
1. Disconnect the AC power cord.
2. Remove the Top cover
3. Change the connection of the TRANSFORMER 1 UNIT primary pins.
4. Stick the line voltage label on the rear panel.

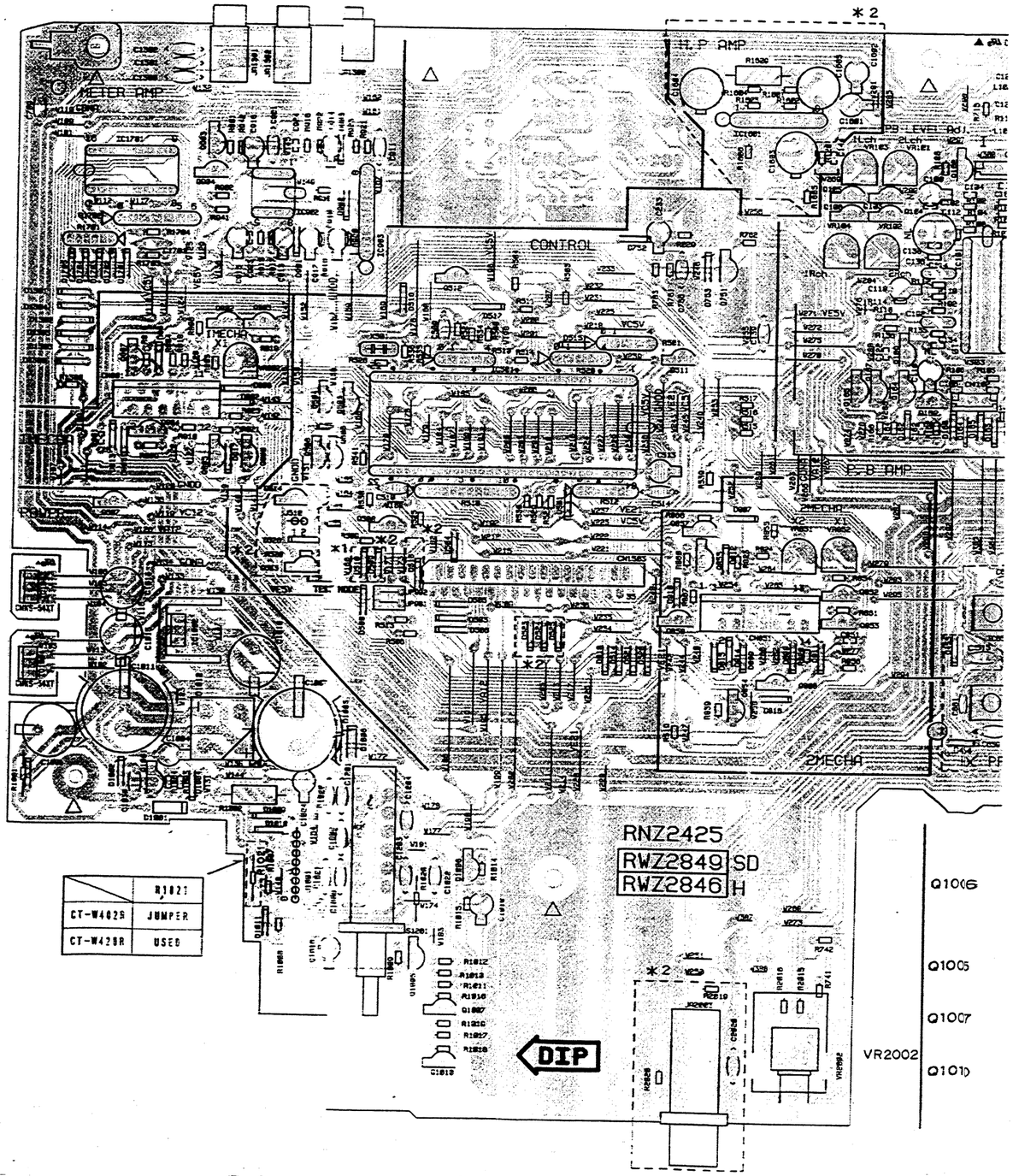
Parts No	Description
AAX-193	220 V label
AAX-192	240 V label

*2
LED UNIT
RNZ2475
RVZ2032

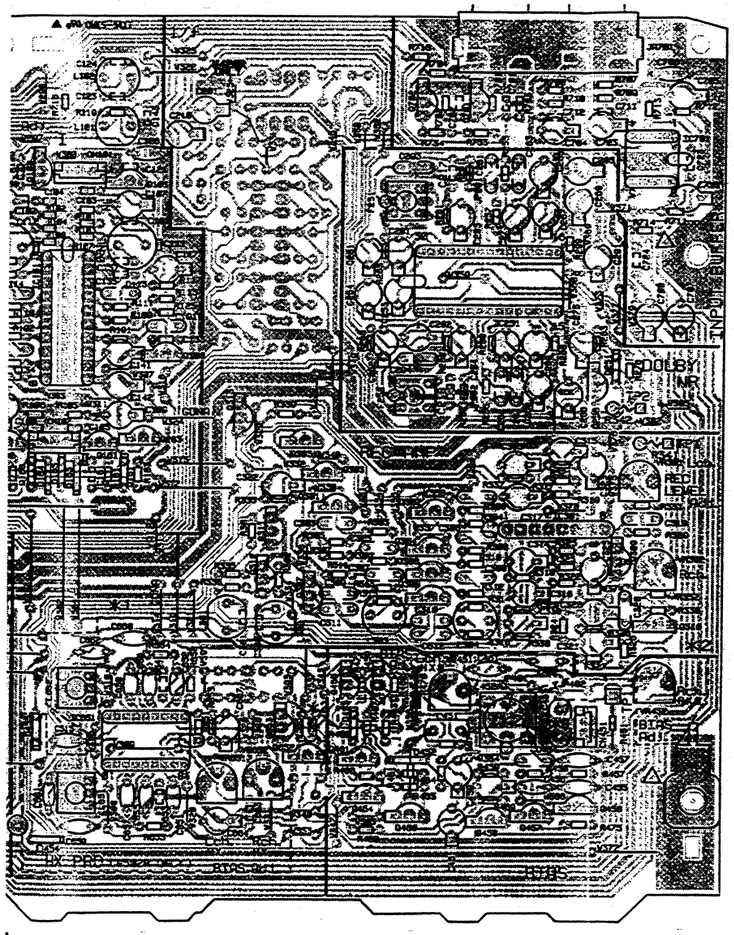




MAIN UNIT (RWZ2843:CT-W402R)
(RWZ2846:CT-W420R)



	R1021
CT-W402R	JUMPER
CT-W420R	USED



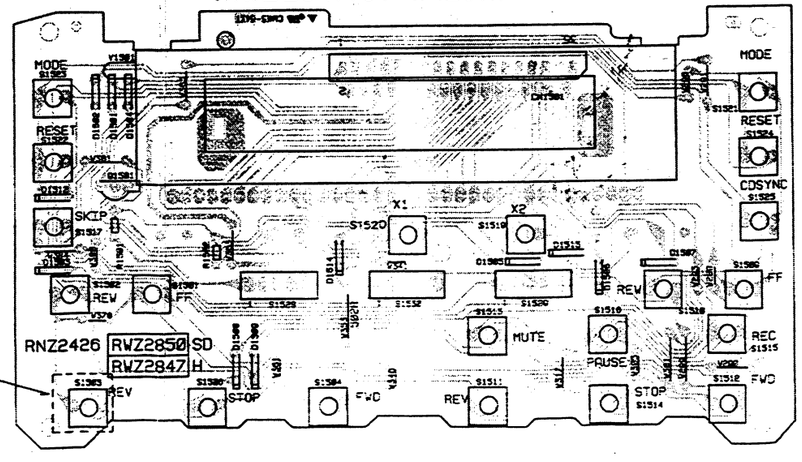
NOTE:

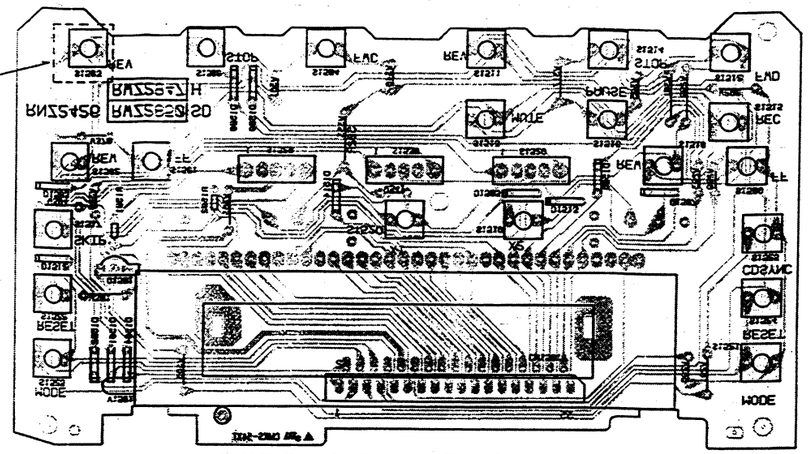
* 1	CT-W402R ONLY
* 2	CT-W420R ONLY

P.C.B. pattern diagram indication	Corresponding part symbol	Part name	P.C.B. pattern diagram indication	Corresponding part symbol	Part name
		Transistor			Ceramic capacitor
		FET			Mylar capacitor
		Diode			Styrol capacitor
		Zenner diode			Electrolytic capacitor (Non polarized)
		LED			Electrolytic capacitor (Noiseless)
		Varactor			Electrolytic capacitor (Polarized)
		Tact switch			Power capacitor
		Inductor			Semi-fixed resistor
		Coil			Resistor array
		Transformer			Resistor
		Filter			Resonator
					Thermistor

1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
3. The capacitor terminal marked with ▭ shows negative terminal.
4. The diode marked with O shows cathode side.
5. The transistor terminal marked with ▭ shows emitter.

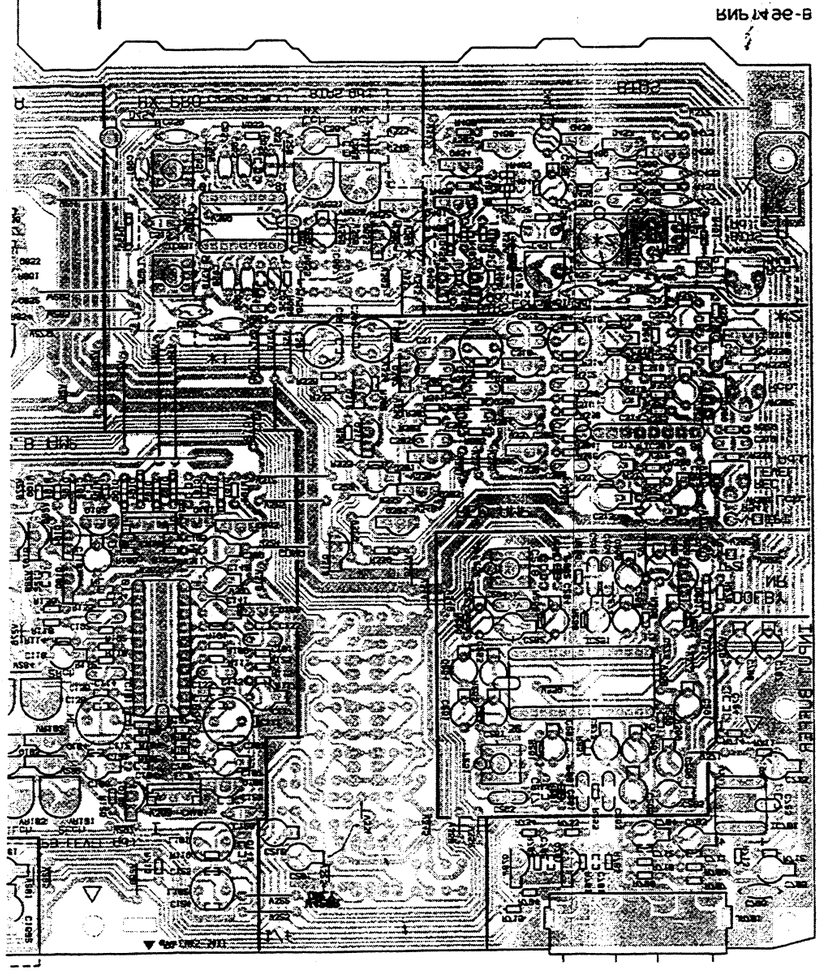
DISPLAY UNIT (RWZ2844: CT-W402R)
(RWZ2847: CT-W420R)





DISPLAY UNIT (RW2584A:CT-W450R)
(RW2584:CT-W450R)

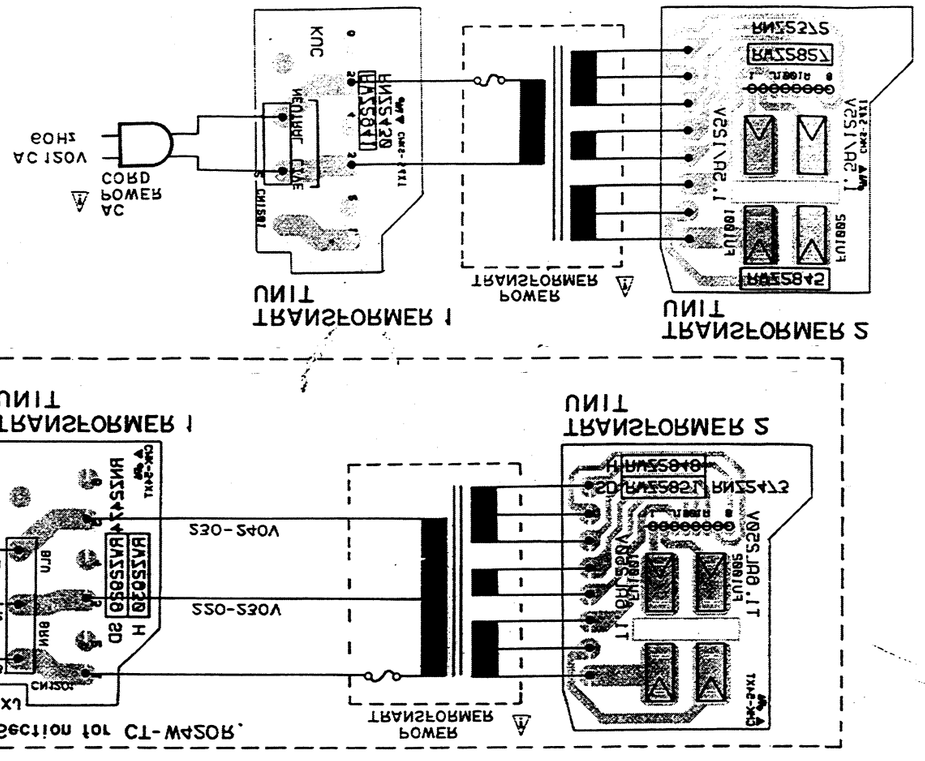
REV AND AUTO PLAY
REV
(CT-W450R ONLY)
(CT-W450R ONLY)



*1	CT-W450R ONLY
*2	CT-W450R ONLY

NOTE:

CT-W450R, CT-W450AW

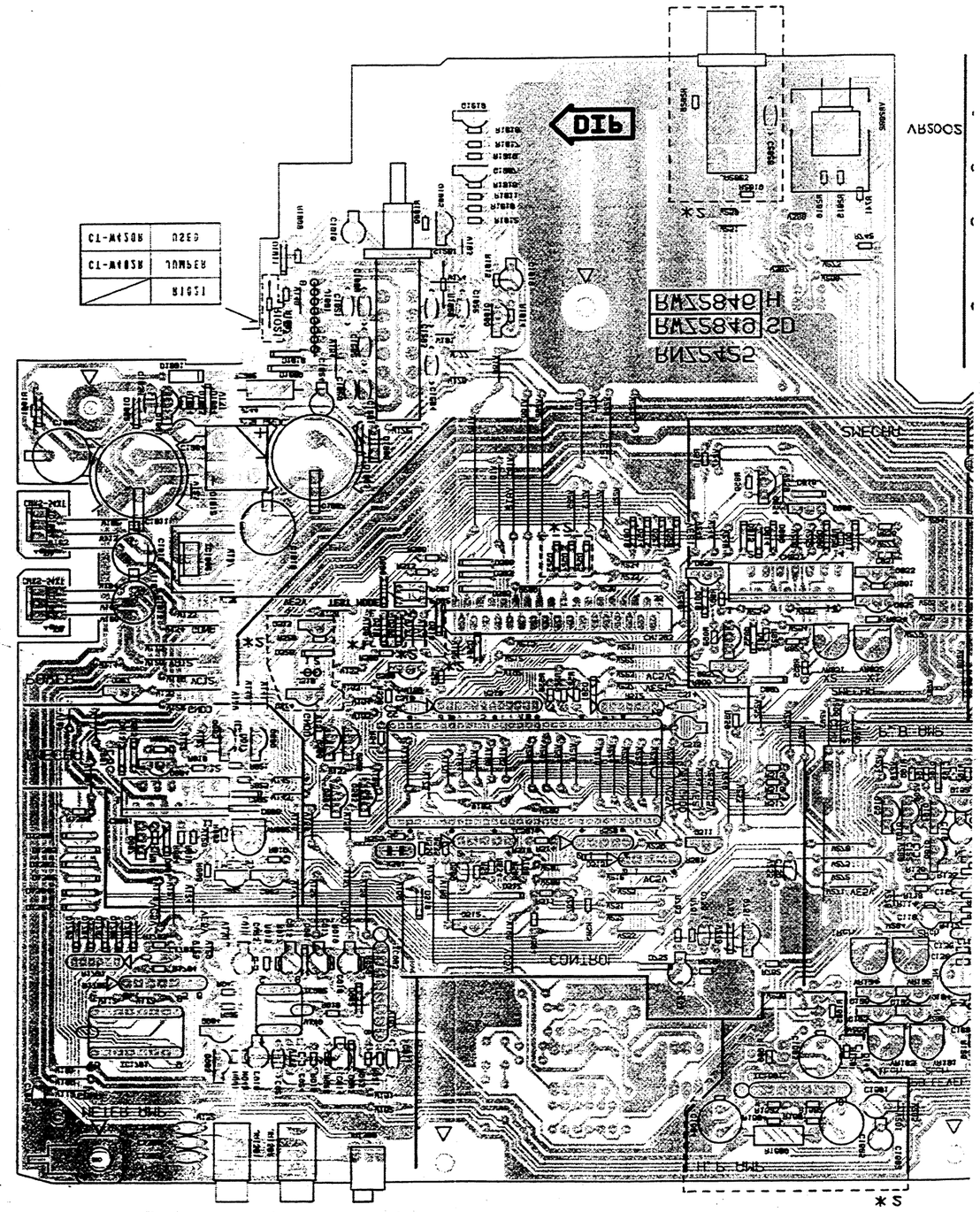


Parts No	description
VAC-193	250 V Label
VAC-193	220 V Label
VAC-193	240 V Label

1. Check the line voltage label on the rear panel.
2. Change the connection of the TRANSFORMER 1 UNIT primary wire.
3. Remove the top cover.
4. Disconnect the AC power cord.

Line voltage can be changed with the following steps.

Line Voltage selection



- PCB diagrams
- View from soldering side

1.5 ADJUSTMENTS

• CT-W420R/HEM, HB, HBXJ, HEMXJ and CT-W502R/KUXJ have the same adjustment except for the following:

RECORDING SECTION

1. Recording Bias Adjustment

• After the adjustment, caution should be exercised so as not to become under bias by checking the distortion rate.

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC	Record the 315 Hz and 6.3 kHz signals at –20 dBV input level and playback. (STD-631)	Deck II	VR451(Lch) VR452(Rch)	LINE OUT	Repeatedly record, playback and adjust so that the playback level of 6.3 kHz signal becomes 0.5 dB ± 0.5 dB when compared with the 315 Hz signal.	

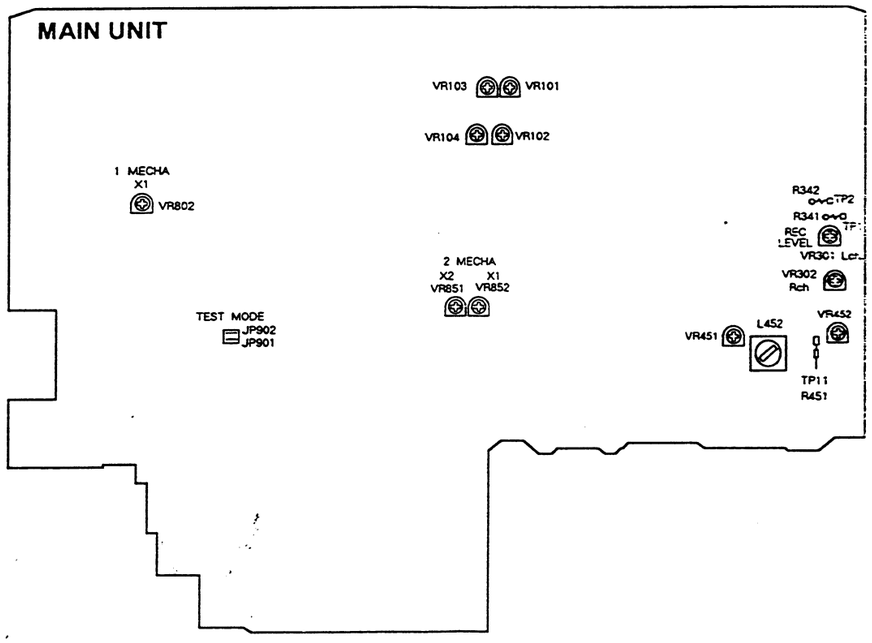
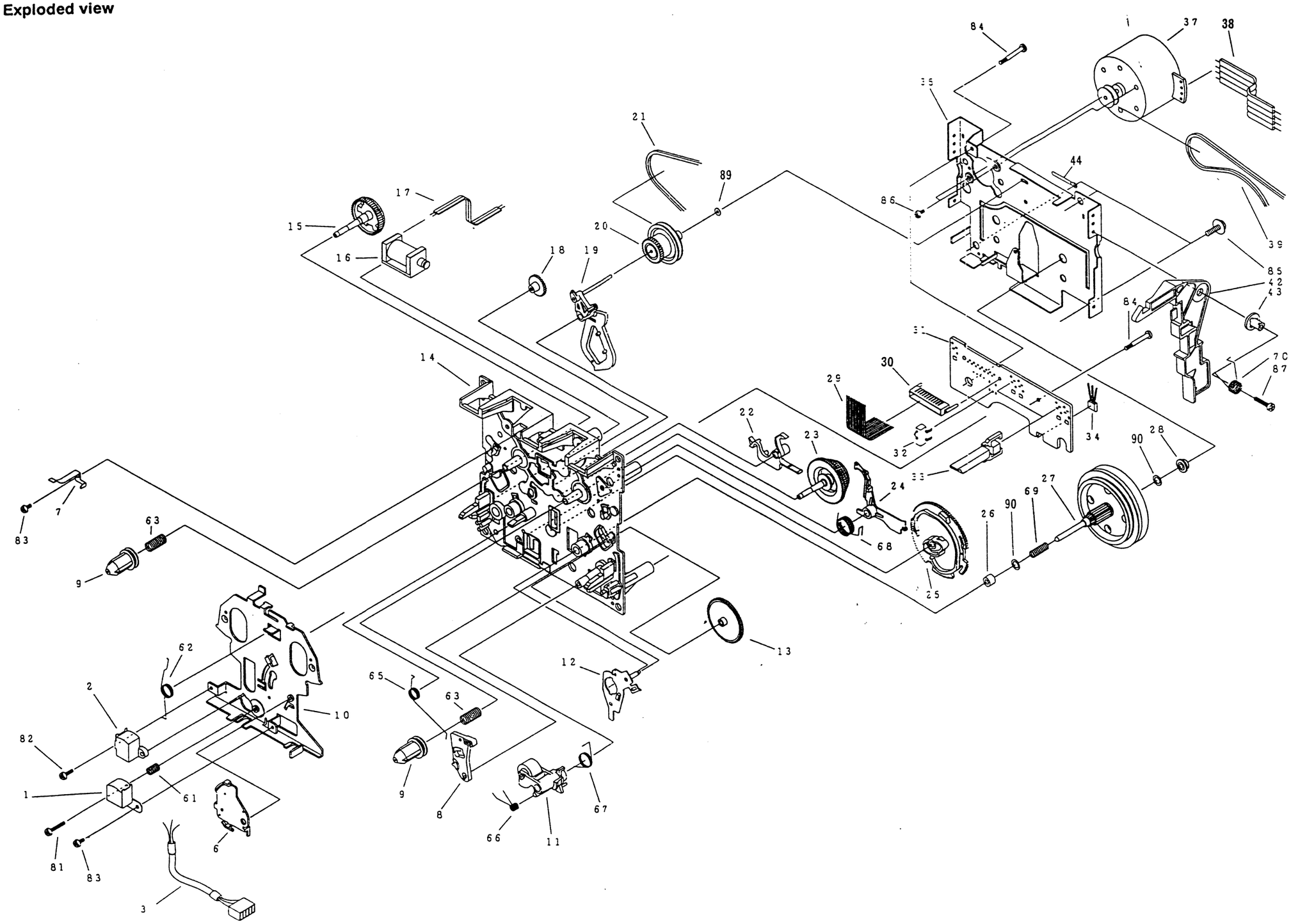


Fig. 1 Adjusting points

1.3 MECHANISM UNIT (DECK I)
(RYM1202 : FOR CT-W402R/KUXJ TYPE)

● **Exploded view**



Parts List

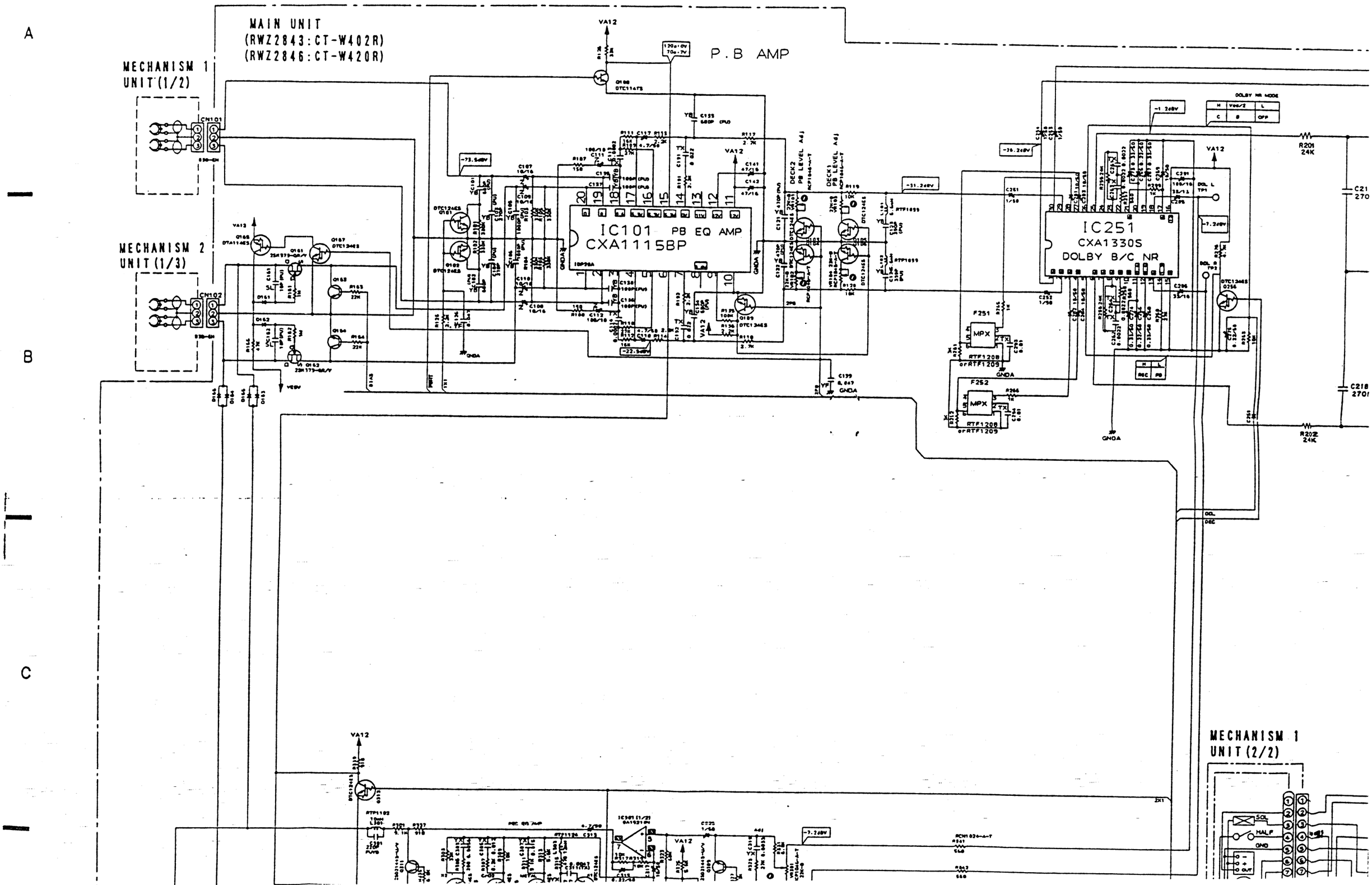
Mark	No.	Description	Part No.
	1	R/P HEAD	RPB1026
	2	DUMMY HEAD	RNK1458
	3	WIRE HEAD	RKP1577
	6	ASS'Y ARM ASSIST	RXA1401
	7	SPRING CASSETTE	RBK1039
	8	EJECT LOCK	RNK1718
	9	CAP REEL	RNK1719
	10	CHASSIS HEAD	RNE1439
	11	ASS'Y PINCH ARM R	RXA1404
	12	ARM PLAY R	RNK1868
	13	GEAR PLAY	RNK1867
	14	CHASSIS OS.	RXA1417
	15	REEL GEAR	RNK1726
⚠	16	SOLENOID	RXP1020
	17	WIRE	RDC1006
	18	GEAR FF	RNK1723
	19	ASS'Y ARM FR	RXA1412
	20	ASS'Y PULLEY FR	RXA1413
	21	BELT FR	REB1158
	22	ARM BRAKE	RNK1724
	23	ASS'Y SUB REEL R	RXA1408
	24	ARM TRIGGER	RNK1722
	25	GEAR CAM	RNK1725
	26	SHAFT HOLDER	RNG1049
	27	ASS'Y FLYWHEEL R	RXA1424
	28	SHAFT HOLDER	RNG1004
	29	WIRE (12P)	RDD1249
NSP	30	HOLDER WIRE	RNK1683
	31	P.C. BOARD	RNP1347
	32	SWITCH MODE	RSN1020
	33	SWITCH (LEAF)	RSN1019
	34	HALL IC.	DN6851A
	35	BRACKET FW	RNE1438
	37	ASS'Y MOTOR	RXM1060
NSP	38	WIRE	RDD1012
	39	BELT MAIN	REB1160
	42	EJECT LEVER R	RNK1811
	43	COLLAR	RNK1704
	44	KEEP WIRE	RNH1004
	61	SPRING (AZIMUTH)	RBH1296
	62	SPRING	RBH1284
	63	SPRING	RBH1286
	64	.....	
	65	SPRING	RBH1285
	66	SPRING	RBH1298
	67	SPRING	RBH1290
	68	SPRING	RBH1295
	69	SPRING	RBH1325
	70	SPRING	RBH1320

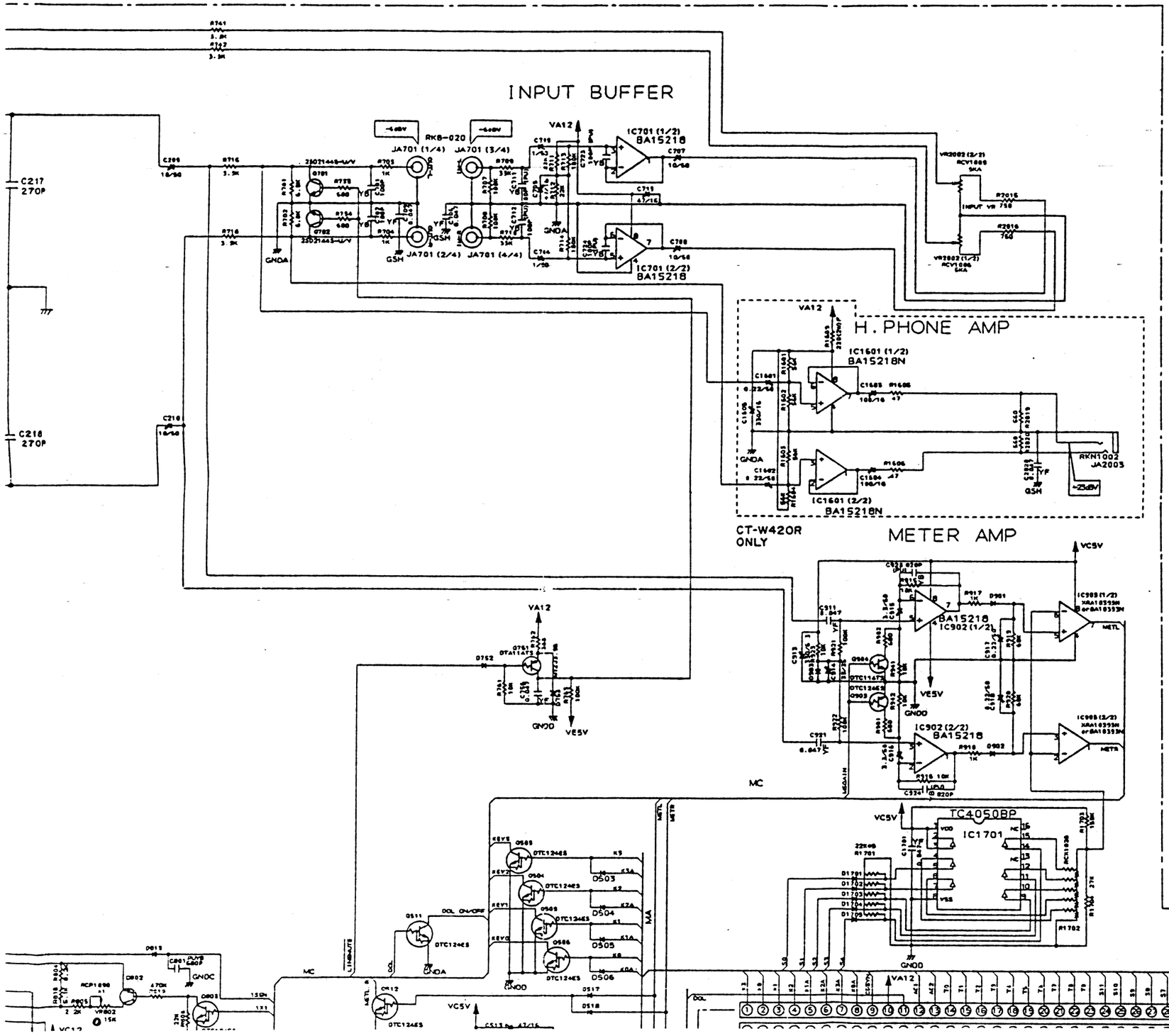
Mark	No.	Description	Part No.
	81	SCREW (AZIMUTH)	RBA1096
	82	SCREW	RBA1029
	83	SCREW	PCZ20P040FMC
	84	SCREW	RBA1093
	85	SCREW	RBA1094
	86	SCREW	RBA1086
	87	SCREW	RBA1095
	88	.....	
	89	WASHER	RBF1046
	90	WASHER	WA26D047D013

Note : No. 45 – 60 are not used.

1.4 FOR MAIN UNIT, DISPLAY UNIT, TRANSFORMER 1 UNIT, TRANSFORMER 2 UNIT AND LED UNIT

- Schematic diagram





Note: (Type 6)

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or μF unless otherwise noted.
   Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or μH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   ▭ : DC voltage (V) in STOP mode unless otherwise noted.
   ⇨ mA or ⇦ mA: DC current in STOP mode unless otherwise noted.
7. **OTHERS:**
   - ➡ : Signal route.
   - ⊘ : Adjusting point.
   - ▼ (Red) : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SWITCHES (Underline indicates switch position):**

MAIN UNIT

S1201 : POWER

DISPLAY UNIT

S1501 : 1-FF	S1520 : 1/F
S1502 : 1-REW	S1521 : MODE 2-COUNTER
S1503 : 1-REV	S1522 : RESET 1-COUNTER
S1504 : 1-FWD	S1523 : MODE 1-COUNTER
S1506 : 1-STOP	S1524 : RESET 2-COUNTER
S1509 : 2-FF	S1525 : CD SYNC
S1510 : 2-REW	S1528 : DOLBY B-OFF-C
S1511 : 2-RVV	S1529 : TIMER REC-OFF-PLAY
S1512 : 2-FWD	S1530 : ⇈ - C - ⊖
S1513 : 2-MUTE	
S1514 : 2-STOP	
S1515 : 2-REC	
S1516 : 2-PAUSE	
S1517 : RELAY/SKIP	
S1518 : X1 COPY	
S1519 : X2 COPY	

	C1011	Q1001	R1020	R1021
CT-W402R	4700/25	2SB1041	RFA1/4L470J	JUMPER
CT-W420R	4700/35	2SA1286	RD1/2LF010J	DCN1002

CD SYNC.
CT-W402R ONLY

SR

CT-W420R ONLY

DISPLAY UNIT
(RWZ2844:CT-W402R)
(RWZ2847:CT-W420R)

LED UNIT (RWZ2932)

S1501~1527:RSG1034

RAW1123

V1501

CN1503 S2045-3S45

CN1501 96035-35F

* 4

	D589	D510
CT-W402R	UNUSED	USED
CT-W420R	USED	UNUSED

* 5

	S1503
CT-W402R	REV AND AUTO PLAY
CT-W420R	1 REV

REC EQ

HX PRO

IC651
UPC1297CA
(DP180)

BIAS ADJ

BIAS OSC

105KHZ
L452

CT-W420R ONLY

CT-W402R ONLY

	L452	R456	R457	R457	C453
CT-W402R	RTD1062	0.022	12K	12K	7500P
CT-W420R	RTD1068	0.0047	6.8K	6.8K	6800P

	R461	R468
CT-W402R	68	10 (1/2W)
CT-W420R	180	1 (1/2W)

MECHANISM 2 UNIT (2/3)

MECHANISM 2 UNIT (3/3)

CN451
B2B-EH
E. HEAD

SOL
HALF
GND
MODE
Cr
REC. F
MET.
REC. R

CRO2
META
BIAS
281AS

VA12
VC12
VC5V
VC9V
VB24

GNDA
GNDD
GSW

AC POWER CORD
220-230/
230-240V
50/60Hz
PD61003
HEM and HEMXJ types
HB and HBXJ types
220-230V
230-240V
POWER TRANSFORMER
RTT1224

TRANSFORMER 1 UNIT
(RWZ2930)

Power Supply Section for CT-W420R.

AC POWER CORD
AC 120V 60Hz
NEUTRAL
LIVE
PD61015
POWER TRANSFORMER
RTT1223

TRANSFORMER 1 UNIT
(RWZ2941:CT-W402R)

FU1001, FU1002 :
1.5A/125V(CT-W402R)
T1.6AL250V(CT-W420R)

J1001
D20PWW0820E
J1001A

TRANSFORMER 2 UNIT
(RWZ2845:CT-W402R)
(RWZ2848:CT-W420R)

10
1
2
3
4
5
D
E
F